

REMARKS

The Office Action dated March 2, 2004 has been carefully reviewed. Applicants' attorney thanks the Examiner for courtesies extended during a July 14, 2004 telephone interview. Claim 1 has been amended. Claims 1-4 are in this application.

Claims 1-4 were rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 4,203,906 to Takada et al.

Applicants respectfully disagree with this ground of rejection. A rejection under 35 U.S.C. § 102(b) is only proper when directed toward an invention that is identically disclosed or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States. Applicants would like to point out that the claimed invention is not identically disclosed or described according to 35 U.S.C. § 102(b). The claimed invention is directed to a method of starting up a reactor for catalytic gas phase oxidation reaction and Takada et al. do not disclose any such method. Takada et al. disclose a catalytic vapor phase oxidation process using a fixed bed shell and tube heat exchange type of reactor but do not teach or suggest a method for starting up a reactor.

In contrast to the invention defined by the present claims, Takada et al. do not disclose any steps of during starting up the reactor causing the raw material and the molecular oxygen-containing gas to pass a range in which the concentration of said raw material (excluding the concentration of said raw material at 0 vol. %) is less than the concentration of the lower explosion limit of said raw material and the concentration of oxygen is not less than the limiting oxygen concentration. Takada et al. only relate to a process for catalytic vapor phase oxidation which comprises using a fixed-bed shell and tube heat exchanger type reactor divided into two zones, supplying feed gas to the tubes and conducting exothermic catalytic vapor phase oxidation while controlling the temperatures for heat transfer medium in each of the zones so that the temperature difference between each of the zones can be maintained between 0-100° C. Further, Takada et al. do not disclose or suggest a step for reaching steady state causing a range in which the concentration of said raw material is less than the concentration of the lower

explosion limit of the raw material and the concentration of oxygen is less than the limiting oxygen concentration.

The present invention has an essential feature that raw material and molecular oxygen-containing gas pass a range in which the concentration of the raw material is less than the concentration of the lower explosion limit of the raw material and the concentration of oxygen is not less than the limiting oxygen concentration shown as a dot pattern area in Fig. 1 attached. To further identify the passing way, the next passing area after the dot pattern area as "the concentration of said raw material is less than the concentration of the lower explosion limit of said raw material and the concentration of oxygen is less than the limiting oxygen concentration" is shown as a cross pattern in Fig. 1. Finally, these concentrations reach the steady state as shown in ① Fig. 1 for example. Applicants submit that additional passing points, for example A, B, or C shown in Fig. 1 between the cross pattern area and steady states shown as ① can be achieved with the method of the present claims. As described on page 14, lines 2-4, of the present application, the present invention allows the concentration of the raw material and the concentration of oxygen to be freely selected within the range not including the explosion range thereby allowing the passing points of example points A, B or C.

The Examiner states that in example 5 of Takada et al., a reaction gas composition of 7.0% by volume of propylene, 12.6% by volume of oxygen, 10% by volume of steam and balance of inert gas containing nitrogen gas is supplied to the catalyst stage (col. 10, lines 17-21) is identical with the claims. However, the claims of the present invention recite that during starting up of a reactor (i) a raw material and a molecular oxygen-containing gas are controlled in order to pass a range in which the concentration of the raw material is less than the concentration of the lower explosion limit of the raw material and the concentration of oxygen is not less than the limiting oxygen concentration (ii) and then reaching steady state causing a range in which the concentration of the raw material is less than the concentration of the lower explosion limit of the raw material and the concentration of oxygen is less than the limiting oxygen concentration, thereby reaching

the steady state. These features are not disclosed or suggested in Takada et al. In contrast, Takada et al. only show the result of the concentrations of the reaction gas composition in a steady state. There is no teaching or suggestion in Takada et al. of controlling the concentrations of the reaction gas compositions during starting up the reactor.

Further to the reasons cited above, "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." Verdegaal Bros. v. Union Oil Co. of California, 814 F.2d 628, 631, 2USPQ2d 1051, 1053 (Fed. Cir. 1987). "The identical invention must be shown in as complete detail as is contained in the . . . claim." Richardson v. Suzuki Motor Co., 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989).

Based on the foregoing, Takada et al. do not identically disclose or describe the present invention. Accordingly, Applicants respectfully request that the rejection of claims 1-4 under 35 U.S.C. § 102(b) as being anticipated by Takada et al. be withdrawn.

The application is now believed to be in a condition for allowance and an early notification thereof is respectfully requested. The Examiner is invited to contact the undersigned should she believe this would expedite prosecution of this application. It is believed no fee is required. The Commissioner is authorized to charge any deficiency or credit any overpayment to Deposit Account No. 13-2165.

Respectfully submitted,

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